

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. (Currently Amended) A rotor ~~(it)~~ for a permanent-magnet electrical machine, comprising an axle ~~(6)~~ mounted to the machine body with bearings, a rotor pack made of iron and arranged around the axle ~~(6)~~, as well as permanent magnets ~~(10)~~ adapted to the rotor pack, used for forming the magnetic poles ~~(9)~~ of the rotor so that the magnetic flux density is at its maximum at the centre of the pole and decreases towards the edges of the pole, ~~characterised in that~~ wherein there are slots ~~(24,26,32)~~ in the rotor poles ~~(9)~~ on the route of the magnetic flux so that at least one slot ~~(24,26,32)~~ extends from both edges of the pole ~~(9)~~ essentially towards its centre and that the slot ~~(24,26,32)~~ is closer to the outer circumference ~~(3)~~ of the rotor than the central axle of the rotor.
2. (Currently Amended) A rotor according to claim 1, ~~characterised in that~~ wherein the slots ~~(24,26,32)~~ are located at a distance from the outer circumference ~~(3)~~ of the rotor.
3. (Currently Amended) A rotor according to claim 1 or 2, ~~characterised in that~~ wherein the permanent magnets ~~(10)~~ are arranged in a V shape so that the magnets ~~(10)~~ extend to the vicinity of the outer circumference ~~(3)~~ of the rotor and that the

magnets (40) forming a single pole (9) are closer to each other at the end towards the axle (6) than at the end towards the outer circumference (3).

4. (Currently Amended) A rotor according to ~~any of the claims 1 to 3~~ claim 1, characterised in that wherein the slot (24) extends from the edge of the pole (a) towards the centre of the pole (9) essentially 20 parallel with the outer circumference (3) of the rotor.

5. (Currently Amended) A rotor according to ~~any of the claims 1 to 4~~ claim 1, characterised in that wherein the width of the slot (24) decreases towards the centre of the pole (9).

6. (Currently Amended) A rotor according to ~~any of the claims 1 to 5~~ claim 1, characterised in that wherein the end of the slot (26) located towards the centre of the pole is curved towards the axle.

7. (Currently Amended) A rotor according to ~~any of the claims 1 to 3~~ claim 1, characterised in that wherein the slot (24,26,51) extends from the edge of the pole essentially towards the centre of the pole on the outer circumference of the rotor.

8. (Currently Amended) A rotor according to ~~any of the claims 1 to 7~~ claim 1, characterised in that wherein there are several slots (32,51,52,53) extending from both edges of the pole towards the centre of the pole, so that the slots on the same edge of the pole are located at an interval from each other in the radial

direction of the rotor and that at least one slot (32,51) on both edges of the pole is essentially parallel with the outer circumference of the rotor.

9. (Currently Amended) An arrangement according to ~~any of the claims 1 to 8~~ claim 1, ~~characterised in that~~ wherein the slots (32,51) closer to the outer circumference (3) of the rotor are wider and/or longer than the slots farther away from the outer circumference (3) of the rotor.

10. (Currently Amended) A rotor according to claim 1, ~~characterised in that~~ wherein the permanent magnets (62) are located on the surface of the outer circumference (3) of the rotor and that the slots (63) are arranged inside the rotor at the positions of the permanent magnets (62) in terms of the radial direction of the rotor.

11. (Currently Amended) A method for manufacturing a permanent-magnet electrical machine so that the air gap flux has a sinusoidal form, said electrical machine comprising an axle (6) mounted to the machine body with bearings, with said method comprising the arrangement of rotor poles (9) around the axle (6), said poles made of magnetically conductive iron (13) and permanent magnets (10) adapted to it, ~~characterised in that~~ wherein there are axial slots (24,26,32) in the rotor, essentially extending from the edge of the pole towards its centre.

12. (Currently Amended) A method according to claim 11, ~~characterised in that~~ wherein the slots (24, 26,32) are made by die-cutting.

13. (Currently Amended) A method according to claim 11, ~~characterised in that~~  
wherein the slots ~~(24, 26, 32)~~ are made using a laser.

14. (Currently Amended) A method according to claim 11, ~~characterised in that~~  
wherein the slots ~~(63)~~ are made by drilling axial holes in the rotor.